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Egypt	MR1
Turkey	MB1
Iraq	MH1
Syria	MD1
●Lebanon	ME1
Historical Palestine	MF2

/For an account of the organization of agriculture and forms of land tenure and an historical summary of changes in agricultural systems and methods in the countries of the Middle East, see 66: Bonné, M1 Middle East, category 116 as follows: Egypt - pp. 127-129, 192-196, Turkey - pp. 129-130, Iraq - pp. 130-133, 189-192, 202-203, Syria, Lebanon and Palestine - pp. 133-135, 188-189, 203-204./

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Lebanon MEI

For information on the topography, climate, agriculture, mineral wealth, railways, settlement pattern, productive capacity of the economy, and trade of the Levant coastland, see MI Middle East, cat. 116, 2d: Fisher, pp. 371-434.]

the distinction between "unemployed" and "retired" among the older men is not at all easy to make. It depends, essentially, on the attitudes of the men themselves and their family. In the second place, among the younger men especially, the distinction between "village worker" and "unemployed" is not entirely clear. The "village workers" mostly are either hired farm hands or assistants to "village specialists." In most cases, it was not easy to tell, however, how steady their work was. In the third place, it is quite possible that some of those in the "city worker" class are actually unemployed most of the time.

The class of "farmer" (*fellah*) is very distinct. A farmer is a man who not only owns his own property, but works it for the support of himself and his family. Most of the farmers in Mismiyeh also tend the agricultural property of fellow villagers who are not farmers. This is done, apparently, largely on a cash basis. The standard fee for a day's plowing, for example, was reported to be ten Lebanese pounds (about two dollars and a half).

It was said, "Before (i.e., before emigration and city jobs), we were all *fellahin*." Now there are only ten farmers, and all of them except one are middle aged or elderly men. The exception is a young man of twenty-eight, a member of lineage XX, who evidently intends to make farming a career. He has made a realistic appraisal of the very difficult agricultural conditions in the village itself, and has acted accordingly with considerable initiative. Shortly after World War II he bought some unused land on the southern rim of Wadi Ba'labin, just outside the Quru, close to the present terminus of the irrigation channel which brings water from the River Bostrous (see Figs. 1 and 2). Considerable blasting with dynamite was necessary in the preparation of terraces, and much land to be conquered in the barren orchard which presumably has brought quick profits (*cf.* Kent, 1949, p. 82), and he said that he plans to expand in the near future. It is significant that he had to go outside the village territory to accomplish his ends.

The nature of the "village specialist" class can better be understood when it is broken down into subcategories, with the number of persons involved in each, as follows:

Mayor	1	Fishermen	3
Taxi driver	1	Surveyor	1
Barber	2	Mason	2
Priest	1	Carpenter	2
Storekeeper	3	Teacher	4

Part-time jobs held by various men most of whom are included in the tabulation above are: storekeeper (the priest), two bakery owners (a teacher and a farmer), and a camp guard (mayor, traditionally a very important position). Two men, still living, were once shoemakers, and another was a midwife part-time. In the population as a whole there are at least six farmer teachers and five farmer owners

[illegible] "The Americans" as the villagers call their relatives in the United States, are concentrated in and around Vicksburg, Mississippi. There are families, also, in Shreveport, Louisiana, and in Marshall, Texas. There are a few in Mexico, Brazil, Argentina, and Australia. One returnee, in particular, spoke English with a noticeable Southern accent. The records of another returnee indicated an identification with the Southern whites as a caste as against the Negroes.

LAND OWNERSHIP, UNEMPLOYMENT, RETIREMENT

[illegible] Mousa Jarjis el-Khouri, the founder of the village, divided the village territory into three equal sections, one for each of his sons. He did this by, as it were, trisecting the triangle at its apex (the eastern extremity of the village, now occupied by the houses). The three triangular strips running down to the sea which were thus created provided the land-property basis for the mentioned lineages. To some extent, the ownership pattern of the houses still reflects this division, with Mousaad Lineage B concentrated in the north, C in the south, and A in between. (see Fig. 1). The corresponding pattern for the village territory as a whole, however, has long since been obliterated by sales and extra-mentioned lineage inheritance. The land-holdings are not clustered by mentioned lineage either. Most of the land in the village is held in individual private ownership (*mulk*), and nearly all the adult males own property in this manner. Along the shore there are some plots which are *waqf*-s (communal) land to the mentioned lineages. "They were never divided because they are worthless: the salt kills the plants." There are four large sections of *waqf* land which has been put in trust. These will be discussed in the next chapter.

[illegible] From what has been said before in this chapter, it can be deduced that most [illegible] However as far as could be determined, each landowner, even though he may be a white-collar worker in the city, maintains his plots (*qat'a*), which are usually widely scattered over the village territory, with the assistance of a resident farmer or village worker.

[illegible] Many of those of whom it was said "he does nothing" (unemployed) or "he no longer works" (retired) actually derive some income by this means, but probably very few in the village could entirely support themselves and their families without money from other sources as well. The young unemployed, as has been mentioned, are from a superficial perspective difficult to distinguish from village workers if they are unmarried and living with members of their family. There are a few cases of heads of households who clearly depend on the help of other members of the family in supporting it. We can say that a man has retired when he does nothing and when no hopes of employment are held. A large number of the men in their sixties and all those over seventy were in this class. Nevertheless, most of these retired men continued to putter about their terraces, pretty actively in some cases.

WELFARE

In a very few cases of total incapacitation, individuals have had to be placed in public institutions for care. Otherwise, the village takes care of its own unfortunates, in conformance with the traditional attitudes of self-sufficiency. A unit of the Lebanese Red Cross visits the village at regular intervals to provide medical care for those who need it, but have been unable or unwilling to go to a doctor in the city. There is a regular, and entirely traditional, mechanism for caring for families who get into financial straits. A close friend of the family, who has learned of the situation because of his closeness, goes to such household in the village saying, "There is wrong on a family in need. I am going to give them some money; how much are you willing to give?" It is very bad form to ask [illegible] whom the collection is being made, and a contribution which is offered under such conditions may be refused by the collector. The strict anonymity which accompanies this behavior suggests that even in such a tight-knit group as the village keeping up appearances is a conscious value. Clique and lineage cohesion undoubtedly contribute to this.

HIGHER EDUCATION AND OCCUPATIONS

Everyone in the village, except for a handful among the very old, can literate. A quite respectable number have received or are receiving college educations. The significance of education in the village will be discussed in the next chapter; here it is appropriate to consider only the bearing which education has on occupations.

Literacy itself is no entity in Lebanon. In fact, among the Christians, at least, one can safely say that it is the expected thing. More literacy alone would raise [illegible] in the city. For professional status or for governmental positions college educations are prerequisite. Medicine and the law require additional training beyond college which no one in Musqif has recently undertaken. The number of positions open to ordinary college graduates which are in line with the individual's ambitions (befitting a learned and cultured person) are rather limited in Lebanon, and many such persons must be satisfied with whatever they can find. In consequence, a certain restlessness and dissatisfaction is to be found among those who have had advanced education.

AGRICULTURAL CONDITIONS

Musqif depends, and has always depended, upon crops which do not require rain or irrigation in the growing season. In order, the most important are olives, figs and grapes. Of these the major cash crop is olives. This has not always been true. Up to 1914 the major cash crop in the village, and in Lebanon as a whole, was the [illegible] cocoon, fed on mulberry leaves. Sericulture has not died out completely in Lebanon, and it is still fairly strong in the Kisrawan, Kura, Metn, and Shuf districts (Feraut, 1948b, p. 249), but it has long since lost its economic

[illegible, CAGE]

circumstances. Of the present conditions in Musrifi the following could be an adequate description:

> In spite of its present unimportance, the mulberry has not deserted the Lebanese countryside. Many houses, and some of the more humble ones, are always surrounded by tiny terraces each one bearing one or two trees of these trees, with their low, truncated trunks and dense foliage, which, formerly, in the eyes of the peasant, were the chosen symbol of fortune. (Hitti, 1948b, p. 342; translation mine.)

Mulberries are grown in the plain, the deep, fertile soil near the houses. Other crops grown here are onions, potatoes, and legumes. The most important small cash crop is tobacco, grown under the restrictive quota system of the official tobacco monopoly.

Figs, olives, and grape vines are, for the most part, outside the village house-cluster. The figs are concentrated at 1500m, but there are some higher up, where all the olives are.

Generally, an individual will have all figs or olives in one plot, but since one man's plot adjoins another's on the same terrace with no property marking of any kind, some terraces are confusingly mixed in appearance. There are some apricots and almonds, but they are apparently not too profitable. The fruit of the occasional date palms and prickly pears are harvested, but no particular care is taken of the plants, although on one occasion a man was observed fertilizing a female palm tree with the pollen of a male one.

Wheat is grown in limited amounts, chiefly in plots on which it is not considered worthwhile to spend the time and money required to develop a good orchard.

During the rainy season, the earth is plowed twice, primarily to keep it aerated and loose. In April and June it is plowed again, primarily to cultivate out weeds. After June, the hot, dry sunshine withers all small plants which are not

In the spring, figs, olives and vines are pruned and cinched (or more pests of which the only one observed was a species of weevil which bores under the bark. Inspection of, and necessary repairs to, terrace walls are carried on throughout the year.

Apricots ripen and are harvested in May. Almonds and figs come in June and July, and this is also the time for wheat harvesting and threshing. Grapes are harvested in August and September, olives in September and October. The last is the real harvest of the village, in which everyone who is able turns out into the fields to help. Men and boys climb into the trees to shake them or beat them with sticks. Women and girls do a large part of the gathering. The men press those which have been allocated for the purpose into oil. The olive mash which remains after the pressing is either used locally as fertilizer or it is sold to dealers who either resell it as fertilizer or have it made up into paper packets which are widely

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used as fuel in the city. In the village, hardwood is collected for fuel in addition to the importation of kerosene.

Animal manure is not used extensively as plant fertilizer because it is scarce. Recently this meager supply has been supplemented by British-made chemical fertilizers. Night soil is not used at all.

Animal husbandry is very limited. Each farmer has a yoke of oxen for traction and some have a few cows for milk. There are one or two donkeys in the village. Two farmers keep bees. The hives are formed in the large water jars (jares) described earlier. Several of these, each split horizontally across the middle, are set in a row. The bees enter and go out by the narrow open neck. The honey is removed by separating the two halves of the jar, and half the honey is left for the bees. Some fowl are kept in the village, primarily for their eggs. Dogs are kept by some householders, and cats by many, for guarding and rousing, respectively. They are not treated as pets, or objects of affection.

It is the lack of water which so seriously limits agricultural productivity in the village. The possibility of drilling successful wells, even with modern equipment, is, as was noted in the first chapter, very remote. Irrigation lines, which affect the coastal strip lower than forty meters above sea level, have been extended almost to Ba'albek from the River Bostrion to the south, and to the village of Medfoun, just south of Bedwen, from the River Jawz. The Qasmiyeh has the misfortune of being halfway between these rivers, at the end of the line in both directions. It is also unfortunate in that since its coastline is more precipitous than surrounding areas, it has a smaller area of potentially irrigable land than the surrounding areas. Nevertheless, it would be of great help to the village if irrigation water could be brought to it.

CONCLUSION

This chapter can fittingly be closed with a series of quotations which summarize, highlight, or give further interpretation to some of the points which have been made. They do not require any comment except that of drawing the reader's attention to their dates, especially those of the last three.

> 1. It is probable . . . that it was on the slopes of the originally forest-clad mountains of ancient Phoenicia that vine agriculture began. (Lowdermilk, 1944, p. 413.)
>
> 2. The effort of the Lebanese has made this country capable of nourishing a relatively dense population. There are few mountainous regions so little favored by nature from which man has drawn such a great agricultural return. (Thoumin, 1936, p. 126; translation mine.)
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> 3. The Syrian peasant is more like a miner than a farmer. (Himadeh, 1936, p. 92.)
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> 4. Elsewhere man has cultivated the land; in the Lebanon he has made it. Elsewhere the harvest is the product: here it is the soil. Men collects and carries to

7: Gulick E-5 (1952) 1955 ME1 Lebanon ME1

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the hollow of the rock the vegetable mould; then hedges raised with stones his wife of cunning fertility to conceal and increase them. From below you gaze upwards at barrenness: from above you look down on an arabesque of verdure: the rosy hues of the fresh turned furrows, the soft green of sprouting crops, nestling within the parkwings, grey and brown, of layers of limestone cut up on end, the faces of which are worn like glaciers. This is their arable land in the central range. (Kinglake, 1848, Vol. I, p. 1.)

3. One gets the vivid impression that the farmer of Bsharreen has lost heart and has lost faith in farming. He is looking somewhere else for a possible solution of his problem, which is now the problem of his growing children—employment outside the village, engaging in business, or emigration. (Tannous, 1941, p. 602.)

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4. Nowadays young men, especially Maronites and other Christians, many of whom are educated, are unwilling to work on the land. They prefer jobs in the towns, and failing that many of them would rather live with their families, unemployed and destitute. So, too, the women of the more sophisticated villages no longer work long hours in the fields. A great part of the income of the Lebanese villages is currently derived from sources other than farming—from trainings in the towns, for example, or emigrants' remittances, or the renting of houses to visitors in the mountain summer resorts. (Lewis, 1955, p. 3.)

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3. The change is not in conflict, functionally or symbolically, with other, firmly established or unchanging norms.

The second condition provides the adequate motivation essential to learning, and, as Hallowell (1945, pp. 183-83) has pointed out, "learning is the psychological crux of acculturation." Using Barnett's terms (Barnett, 1940, p. 31), we can say that if the *function* of the new item is apprehended and appreciated by the villagers, they will accept it, provided that it does not involve too much expense, does not necessitate elaborate readjustments in otherwise stable systems, and that its meaning is neither odious (for example, a part of foreign imperialism) nor in conflict with the meanings of other, stable traits.

Perhaps this analysis will be clearer when we consider two areas of "material culture" which have remained almost wholly unchanged. One of these is diet which has remained unchanged because any fundamental alteration in it would meet with situations which would be contrary to any or all of the three conditions which are necessary to successful change. It would be enough to say that change in diet would involve extra expense and a major alteration in eating habits and cooking methods (violation of conditions 1 and 3). But besides this, the villagers see no purpose in changing their basic diet. It satisfies them physically and gastronomically (violation of conditions 2 and 3). It is probable also that they derive no little spiritual satisfaction in being able to maintain old patterns in this area of behavior where no change is forced upon them.

The other area of material conservatism is in farming techniques. Although farming itself has demonstrated modernity in terms of the number of men who practice it (a negative sort of change), farming techniques remain the same. This is largely because conditions 1 and 2 do not obtain. To introduce, for example, tractors and modern plows and harrows, into a remote village like Mrusjil, would not only involve great expense, it would also be rather absurd from a practical point of view. There would be the problem of moving the equipment from one terrace to another, and most of the terraces are so small and irregular in shape that it would be difficult, if not impossible, to use when it was in place. Chemical fertilizers have been adopted to some extent, probably limited by expense. Certainly the villagers are most eager to obtain an irrigation system, but here their desires are thwarted by external conditions.

ECONOMIC CHANGES

In the economic or subsistence sphere, the village has obviously undergone a profound change. A number of rural specialties, such as weaving and shoemaking, have completely gone out of existence. Farming, formerly *the* primary occupation, now occupies a very small number of men. A large proportion, if not most, of the village income is now derived from urban occupations.

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Physical Description of Area

361 The coastal plain in the Kamsie area is bounded by the Mediterranean Sea on the west and
182 the Lebanon range on the east. The climate is Mediterranean with dry summers, nearly all of the
184 rain falling between October and May. The soil is chiefly a heavy clay. Much of this coastal area
241 is suitable for irrigation. While some of the land is rocky and in the United States would not be used for farm land, nearly all land capable of cultivation has been brought under the plow. The steeper slopes are protected from serious erosion by rock wall terraces. The climate is favorable to the growth of temperate and sub-tropical crops. Citrus fruits, bananas, vegetables, and cereal crops are found in abundance.

361 The major markets for the products of the five villages are Beirut and Saida. All of the project
491 and control villages are linked to the Tyre-Saida-Beirut main coastal road by gravel surfaced roads
487 except for Loubieh and Kabrikha, which are dependent upon trails. In no case is the dirt sub-mount
494 from two miles from the main road. The traffic on this road is heavy and trucks and buses are frequently available for taking products to Saida or Beirut. These towns are 18 and 42 miles respectively distant from Adloun, the most southerly village.

Village Government

632 The five villages included in the Kamsie Rural Improvement Project have a similar form of
633 local government. Each village has a mukhtar (mayor) who is elected in a more-or-less democratic
491 manner. In each village there is also a board of aldermen or village elders. This board is also
658 elected in effect and is composed of from two to six members. The mukhtar is generally the largest landowner or sharecrop and one of the wealthiest men in the village. The aldermen as well are among the more well-to-do villagers. However, the concept of wealth is relative. Often the holdings owned by local villagers may be large in comparison with others in their own community, but small indeed when compared to the size of holdings in the village controlled by persons living outside the village. The common fellah does not enjoy representation by his peers in this area whether he has such supervision is not known.

Farm Organization

The isolated farmhouse, typical of agriculture in the United States, is rarely seen in Lebanon. In the five project villages nearly all farmers live in the *dai'ah* or built-up area. Their wooden plows, harrows, and other farm equipment are stored each day in their houses in the *dai'ah*. Often a stable is connected to one part of the living quarters to take care of the family cow or other livestock. The concentration of dwellings in one area in the Middle East often results in a considerable expenditure of time in riding to fields located sometimes two or five miles from the village. In the project villages the land is in a narrow strip. Farms on the far ends require an hour or more to reach by walking.

The share-tenant or smallholder has a cow or two which he depends on for draft and milk, a simple wooden plow, or a few other simple hand tools. These comprise his capital equipment. The field work is shared by all the members of the family, although in the *dai'ah* sections there is a fairly rigid division of labor between the sexes. Plowing is a man's work, while rarely will a man be seen carrying water from the village fountain.

In the project area as elsewhere in most of tractors, harrows, mechanical threshers, or other mechanized farm equipment except on one or two large farms operated by non-resident owners. None of the project villages is electric power. Farm organization is based upon an economy of labor rather than capital, low wage rates and an ample supply of laborers combine to make the use of labor more advantageous than mechanization. In 1952 the prevailing rate for farm laborers was L.L. 3 (about $1/2) for men and half that for women per 10 to 12 hour day.

Most of the project villages have a plot of land called the *baidar* where the villagers, threshing in common, thresh their grain. Here the wheat or other seed crop is placed after it is brought from the fields. For each after month in the summer, one finds the men pulling behind them a massive, a flat boardlike underside of which is covered with protruding stones or jagged pieces of metal. The farmer rides or a small boy rides on this seat with a stick drives the oxen over a layer of grain. In this way 1 hectolitre of grain are loosened until the straw is cut fine for fodder. In order to separate the kernels grain from the chaff, the farmer tosses the mixed grain and chaff

over the air. A slight breeze is all that is necessary to blow the chaff to the side while the heavier grain falls to the north. Later the kernels of grain are hand-sieved to remove rocks and other debris. The harvesting of grain entails a tremendous amount of the villagers' time and effort but, since he usually has nothing else to do, this method of harvesting is less costly to him than mechanical methods.

Land Utilization

311 No reliable statistics are available in Lebanon concerning the breakdown of the land area according to the use to which it is put. From published information it is not possible to obtain a breakdown of the area in each village devoted to dry crops and irrigated crops, or as to land devoted to pasture, forests or waste. For this reason it was necessary to depend on the muktars and other village leaders for these estimates. It is evident, therefore, that the data contained in Table III on land use distribution is not exact, but only the calculated estimates of reasonably well-informed sources. The discrepancies between the muktars' estimates and figures given by the cadastral office could not be checked without a land use survey. As in the case of population figures, such comparisons will have to proceed with caution in using these figures.

The muktars of the five project villages estimated the total area of these villages to be 28,000 metric dunums[1] (2,800 acres). In order to check this figure, the total area of the five villages was obtained from the cadastral office. While these files did not give the land-use breakdown, they showed the total area as 30,600 dunums. There is a discrepancy of 2,600 dunums between the figures supplied by the muktars and those obtained from the government. This may be due to a failure on the part of the muktars to include waste land in the total village area.

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[1] A metric dunum is equivalent to 1,000 square meters or approximately one quarter of an acre.

Irrigation and Crop Pattern

342. The percentage of land under irrigation varies considerably among these five villages (see Table III, column 6). While 80 percent of the total land area of 'Adloun is estimated to be under irrigation, only 2 percent of the total land area of Sarafand to the north is irrigated because the irrigation canal now stops at the village limits of Sarafand. Lands of Loubya, and Ein Nourieyeh do not extend into the irrigated coastal strip.

241 In the project villages of 'Adloun and Sahmaniyeh, where a considerable portion of the land is under irrigation, the principal products by value are bananas, oranges and tomatoes. Other products grown on the irrigated land include okra, eggplant, squash and cucumbers. As the village lands in the project area only recently have been brought under irrigation, the emphasis at present is on the production of bananas and the establishment of citrus groves. The farmers in many cases has interplanted citrus trees with bananas. Bananas shoots planted in February will produce fruit the following November, but it takes from six to eight years for an orange tree to mature. Where dry farming is the predominant system, as in Sarafand, Loubya, and Ein Nourieyeh, the emphasis naturally switches to crops requiring less water. Here the principal crops according to value include wheat, barley, corn, olives, watermelon, and figs.

312 In the project area already serviced by the Kassmie Irrigation Canal, 5,500 dunums are under irrigation. Of this total irrigated area, only 413 dunums are irrigated by pumps, the remainder being irrigated by gravity. Supplementary sources other than the Kassmie Irrigation Canal are used to a very limited extent to irrigate the fields. Sarafand pumps water from local wells. Sahmaniyeh utilizes water from the Hamadiyeh spring and Loubya spring. Loubya, as well, obtains irrigation water from the Loubya spring. Ein Nourieyeh, with lands located above the canal, irrigates a few hundred dunums with water pumped from two wells. 'Adloun uses water from the spring of 'Adloun. Small areas of good quality land among the dunes along the shore are irrigated by pumping water from the canal.

Further north in the coastal area, which has not as yet been reached by the irrigation canal, the irrigated land is almost wholly devoted to pumping. These are Ein Bedjjeriyeh, El-'Addaseriyeh and El-Ghaziyeh where 1,100 dunums are under irrigation, over 90 %, of the irrigated area is served by pumps. The balance is irrigated by gravity from small springs.

Wheat was listed among the four most important agricultural items in every one of the eight project and control villages. Barley was included among the four most important crops for the villages of Sahmdoiyah and 'Aabrum. Reference has already been made to the prevailing types of crops grown in the villages, depending on whether the area is predominantly dry or irrigated.

Livestock

The livestock owned by villagers or landlords and kept upon the lands of the village included cows, goats, sheep, donkeys and chickens. No camels or horses were reported in the five project villages. It was not possible to estimate the number of chickens in each village. Goats formed the largest statistical group, numbering 1,000 animals. Eight hundred and eighty cows, 550 sheep and 62 donkeys were reported (Table IV). According to value, cattle were by far the most important animals.

In the village of Sahmdoiyah, Mr. Fuad Iqbayd owns a herd of ninety head of livestock. The herd is valued at L.L. 100,000 (about $30,000) and it was claimed that milk from the cows is sold for L.L. 60,000 (about $11,000) annually. In addition to milk, a small amount of meat, goat hair, wool and manure is sold by the villagers. Due to the lack of pasture land, the herds of village livestock are fairly small. By and large the livestock in this region are for the purpose of local power and consumption. Cows provide the farmer with a draft animal and milk; goats furnish milk, goat hair and meat; donkeys furnish transportation for water, produce, and the farmer's family; while the wool from the sheep is utilized by the industrious housewife to furnish clothing for the family, stuff mattresses, or act as a barter item at the market. Manure is important to the diet of the average family.

Land Ownership

Statistics are presented for only the five project villages regarding land ownership and operation distribution. It is, however, evident from available data that the pattern found in the project area applies to the three control villages.

[following p. 241(A)]

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Egypt, Turkey, and Lebanon, it is the agricultural village that is paramount. The Lebanese, it is true, are generally known abroad as a trading people, whose shipmasters sailed throughout the Mediterranean world since ancient times. But this urban, merchant community has always been linked by the rural community of the Mountain.

In few other countries do we find the village-community type of human settlement so firmly established and so influential in the development of national life as in Lebanon. The village has existed continuously there since ancient times. Despite great upheavals, the farmer of Lebanon has patiently and persistently cultivated the soil, produced his crops, and raised his livestock. He has found in the rugged mountains a refuge from persecution and oppression. He has adapted himself efficiently to the difficult terrain, blasting the rocks and erecting the steep slopes in order to make room for his trees, vine, and grains. Over many centuries of adjustment to his particular physical and cultural environment, he has succeeded in developing a closely defined and firmly established way of life. He stands at present as the main pillar of national life in the mountains of Lebanon, the embodiment of a long and rich cultural heritage.

In appraising the significance of the village community in the life of present-day Lebanon one can readily point out three major contributions. The first of these is biological: the replenishment and revitalization of the population in general, and of the urban population in particular. A study of the development of Lebanon over the past hundred years reveals clearly that rural areas have been mainly responsible for the building up of the flourishing urban or partly-urban centers of Sidon, Beirut, Tripoli, and Zahleh. They have maintained a high birth rate, unlike the trend prevailing in most rural areas of the Middle East. Due to a healthful climate and relatively high standards of sanitation, infant mortality is here lower in Lebanon than in the other countries of the Middle East. The result has been a constant stream of vigorous emigrants moving from villages into urban centers.

Some fifty years ago this population overflow produced such pressure on the limited land and technological resources of

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Lebanon that it could no longer be absorbed within the country. The village folk had the choice of submitting to a life of poverty or of emigrating abroad, seeking new opportunities and fortunes. The first alternative was incompatible with their cultural heritage. They were mostly independent farm owners, not share croppers; they were awakened by a comparatively high degree of learning; they were exposed to influences of the West; and they had a long history of struggle against great odds, demanding initiative and enterprise on the part of the individual and the group.

Consequently, they resorted to emigration for relief. Some sought opportunities in the urban centers of neighboring Arab countries. They established themselves there as merchants, publishers, doctors, and as government officials in various capacities. Most of them, however, turned toward the promising New World, north and south. It is estimated that these emigrants, together with the families they have reared, now exceed in number the population resident in Lebanon itself.

Recent estimates put the population of Lebanon at 1.2 million, of whom about 75 percent are rural. There seems to be no slackening in the high rate of increase. The density of population, one of the highest in the world, amounts to about 300 per square mile of total area, and 1,000 per square mile of cultivated area. In the Middle East it is exceeded only by Egypt, which holds the world record with a density of about 2,000 per square mile of cultivated area.

This biological resource of the village community constitutes both a serious problem and a challenge to Lebanon. Emigration possibilities for the surplus population are no longer as readily available as they were prior to a decade or two ago. A realistic, long-range solution lies in the application of an enlightened population policy and developmental program that would result in controlled growth on the one hand, and in the efficient development of the country's natural resources on the other.

The second major contribution of the village community to the country is economic. This is readily apparent and needs little elaboration. Dwellers in the villages are the farming folk of Lebanon. Their agricultural activity is the mainstay of the

national economy. They produce most of the food consumed by the country, as well as raw materials for industries and some surplus products for export. In fact, agricultural items are Lebanon's principal exports. Agriculture is also destined to play an even greater role in the future. At present the area under cultivation amounts to [illegible] acres, including less than [illegible] acres under irrigation. The crop land can at least be doubled, mainly by means of expanded irrigation. The abundant water resources could be much more efficiently utilized than it now is for increasing crop production, for the generation of power, and for household uses. There are good possibilities for the development of such agricultural and cottage industries as canning, dairying, cold storage for fruit, tanning, and handicrafts. Furthermore, production can be materially increased by the application of improved methods of cultivation. In other words, the village folk of Lebanon are in a position to make an even greater contribution to the national economy than they now do, provided they are given the necessary technical training and expert guidance.

In the third place, the rural community has been a main contributor to the cultural development of Lebanon. By culture here is not meant the conventional fine arts or those items of refinement in behavior that are shared by the few. We must rather the pattern of living that is characteristic of Lebanon as a whole. We find here certain distinctive features, many of which can be traced directly to their origin in the village community. It is true that cultural influences from abroad have been finding their way into urban centers and thence into rural areas. These influences, however, together with those that have originated in urban centers, have not superseded the main body of culture, which remains predominantly rural. Family solidarity, group loyalty, individual initiative and enterprise, co-operativeness, community consciousness, a democratic way of living involving basic equality, and folk poetry are outstanding examples.

Finally, mention should be made of the significant leadership, in the various walks of life, that has been produced by the Lebanese village. The majority of leaders in politics, education, medicine, law, business enterprise, literature, and the other pro-

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Chapter Ten

SYRIA AND LEBANON

The Land and the People

The area of the present Syria and Lebanon lies to the north of Arabian Deserts and to the western bows of the Fertile Crescent. The two republics do not enclose within their boundaries a natural geographic entity and their climate and topography are best studied in relation to the surrounding countries.* But within the political boundaries of the two states, the following geographical divisions may roughly be distinguished:

(1) *The Coastal Strip.* This is about twenty miles wide near Latakia and rather less just north of Tripoli, but in some places disappears and the mountains meet the sea. Olives, bananas, citrus, and vegetables are cultivated intensively near Beirut.

(2) *The Mountains.* Starting from the north, the first coastal mountains are the Jebel Ansariya (also known as the Alawi Mountains) which average 5,000 feet and are well populated on the western slopes. To the south is the Homs-Tripoli gap and then soars the Lebanon range with peaks of over 10,000 feet. Even on the upper slopes of this range water is plentiful, there is close cultivation, and the villages and towns are prosperous. Near Beirut are situated the mountain resorts to which many of the city workers move each night when the summer brings its humid heat. The interior ranges of mountains lying parallel to that of the Lebanon are the Anti-Lebanon (between Homs and Zahle) reaching over 7,000 feet and the range of Hermon (between Zahle and the Israel border) which reaches 9,000 feet. Water and cultivation are far less plentiful on these than on the coastal mountains. Further inland still and to the south of Damascus lie the Leja, a bleak area of igneous rock, and the Jebel Druze, which reaches [illegible] feet and lies north of the Jordan border.

(3) *Plains and Plateaux.* Hardly any of the territory of Syria and Lebanon lies less than 500 feet above sea-level and south of Homs almost all the land is over 1,600 feet. The richest agricultural land is on fairly high ground and forms part of a

* See W. B. Fisher, *The Middle East: a Physical, [illegible] and Regional Geography* (London, Methuen, 1950).

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crescent which (starting from the Iraqi border) comprises the Jezira, the countryside of Aleppo, Homs, and Hama, and the fertile and beautiful Beqaa valley. The cultivation of cotton and cereals is particularly successful in the north-eastern corner of Syria where there has been great general development in the last five or six years. From Homs one road leads south to the Beqaa valley which continues between the two mountain ranges of Lebanon and Anti-Lebanon, past Zahle to the southern border of Lebanon. Further inland is the road to Damascus which passes to the east of the Anti-Lebanon over the Qalamun plateau. This is mostly barren land, reaching over 4,000 feet; the areas of cultivation usually need more water, but suffer occasionally from bad floods. The oasis of Damascus is known as the Ghouta and there every drop of water in the two rivers is made use of, by an ancient system of canals which follow the contours and provide water lavishly as they gradually rise height. Between Damascus and Jordan lies the Hauran plateau much of which is about 2,000 feet above sea-level; here there is cultivation of cereals but few trees are now left and there is insufficient water to ensure good crops each year.

(c) *The Desert.* To the south and to the east of the Fertile Crescent there spreads a desert that extends southward for over

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SYRIA AND LEBANON

MAIN CROPS

	Area (000 hectares)		Production (000 metric tons)		Yields (100 kg. per ha.)
	1937	1952	1937	1952	1952
Wheat	811	710	453	500	7·5
Barley	153	160	114	177	11·0
Cotton	53	81	11	..	..
Tobacco	..	..	3	6	..
Citrus fruit	..	..	75	150	..
Grapes	60	..	80	..	..

.. = not available.

(Sources: Banque de Syrie et du Liban, *Statistics 1952* (Paris 1953); except figures for yields, citrus production, and area and production of grapes, all of which have been taken from FAO, *Yearbook of Food and Agricultural Statistics*, 1952.)

312 241 439 There is enough water for land to be used more intensively than in Syria but there is not enough room to grow all that the country needs. Improved methods have increased the yield of cereals per acre, but Lebanon will always have to import wheat. The crop of grapes is nearly double the weight of the wheat harvest and Lebanon exports grapes, wine, and the best quality arak. The citrus exports are high but the growers have not yet established the same name for quality as have the Israelis. Melons, water-melons, apples, onions, and potatoes are also important crops and vegetables are exported as far as the oil towns of Kuwait and Dahran. Cotton and tobacco are also grown in small quantities.

423 369 The land is more evenly parcelled out amongst the people in Lebanon than in Syria but, despite the fact that there are many small holdings, there is a general shift from country to town, and Beirut and its immediate neighbourhood hold nearly half of the population. In the coastal regions of intensive cultivation small holdings predominate, while in the plain regions large estates worked by share-croppers are the most prevalent form of land tenure. Some estates owned by rich men are farmed under modern methods and equipment and there is less room for improvement or for expansion in agriculture than in Syria.

Industry

433 Relative to its size, Lebanon is one of the most industrialized countries in the Middle East area. It is probable that nearly 50,000 persons are so employed, of whom over half are factory workers. However, Lebanese industry has only partly recovered from the loss of the Syrian market and some industries had either to move to Syria or to curtail production. The biggest industries are electricity, which produced 130 million kwh. in 1951, and the Chekka cement factory south of Tripoli, which produced 303,000 tons of cement in 1951. Cotton weaving and

18: Tannous M.G-8 (no date) 1951 M1 Middle East M1

most in their minds. Furthermore, they put the new land under cultivation through an understanding with the local tribal chief. He guarantees them "protection" of the crop in return for a portion of the produce. Nowhere does the peasant figure in this deal other than as a laborer or a sharecropper. Nowhere do we see signs of the emergence of that badly needed class of small, independent, cultivator-owners.

The situation in Lebanon presents a glaring and enlightening contrast between two systems. In the mountain area, the heart of the country, a strong tradition of private ownership by small independent farmers prevails. In most cases, the family farm averages about 10 acres. The soil is scanty and the terrain difficult; but the people have their hearts in what they own. They have blasted the rocks and built extensive terraces to prevent erosion; they have made the mountainsides produce abundantly of olives, grapes, figs, and apples. On the narrow coastal strips they have grown luxuriant orchards of citrus and bananas. More significant than all of this, we observe that the village folk in this area enjoy much higher standards of living. This is clearly manifested in their diet, health, housing, and a literacy rate of some 90 percent.

True, they have other sources of income, especially from emigrants residing abroad. Yet the independence they have gained through ownership of the land has endowed them with the initiative and the possibility to seek these other sources and better their living conditions. Unlike the sharecropper, who is doomed to his status, the small independent owner is free to move up the ladder.

Our argument in this respect gains support from the situation that prevails in the rest of Lebanon — in the Akkar plain of the north, in the Bika valley of the interior, and in the mountain area of the south. Here we witness the predominance of the same feudal-absentee-sharecropping system that exists in Syria and Iraq. Here also we witness the same conditions of deprivation, lack of development and low levels of living. Our argument gains further support from a consideration of living conditions in those village communities of northern Iraq, of some sections of Syria and Jordan, where the people are independent and own

During the recent war there was an expansion of cultivation in Syria as a result of high prices and mechanization. The previous table shows the cultivable and cultivated land in different provinces and the distribution of these areas in 1943.

Little is known about the rate of population growth, but it is believed to be rapid. According to the most recent estimates the total in 1944 was 3,987,000, of which the population of Syria was 2,860,411 and of the Lebanon 1,126,600. The population of Syria was divided as follows:

SYRIA: POPULATION AT END OF 1943

Province	Total
Aleppo	
Damascus	
Hama	
Homs	
Jebel ed Druse	
Latakia	
Lebanon	
Palestine	
Tripoli	
Zor	
Total	2,860,411

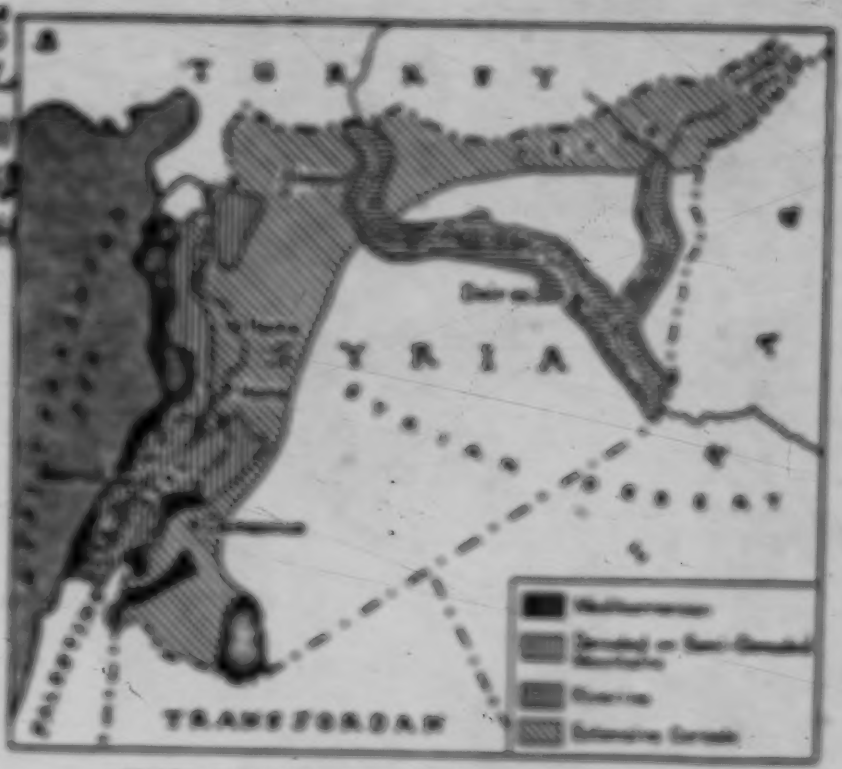
(This estimate excludes the Bedouin, whose number is estimated at 300,000.)

About three-quarters of this total, or about 2·1 million, are rural. The amount of cultivated land per head is 2½ acres, but because cultivation is so extensive the area actually cropped is only some 1½ acres.

Lebanon, by contrast with the dry plains of Syria, is intensively cultivated because of the high rainfall on the coast line; yields per acre are higher, and crops are more diversified, including citrus, olives, bananas; small irrigation schemes have been developed along the coast on the streams from the Mountain. The Lebanon depends for part of its grain supply on Syria, and all the cultivated land is cropped. The cultivated area in 1943 amounted to 1·3 million acres. The total population in 1944 was estimated to be 1,126,600; of this probably about 750,000 are rural, and the amount of cultivated land is about 1½ acres per head.

Grain production in Syria and Lebanon together before 1939 averaged 800,000 tons and rose to about 1 million tons during the recent war.

Lebanon HQ1
Syria HQ1



SYRIA AND LEBANON: AGRICULTURAL AREAS

GRAIN PRODUCTION IN SYRIA AND LEBANON, 1934-43

	Wheat			Barley		
	Area	Crop	Crop per acre	Area	Crop	Crop per acre
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

With a total rural population of about 2·8 million in 1943-4, the production of grain per head amounts to only 3·4 quintals or 6·4 hundredweights. Thus the problem for Syria is to in-

increase the productivity per acre and also to expand the cultivated area per head.

In the Lebanon, however, with its steep hillsides under intensive cultivation, there is a definite pressure on land resources. The limits of intensification appear to have been reached, and a large part of the village population supplements its income by work in the towns, and by remittances from abroad. If the land tenure system in Syria were less oppressive, room might be found on the land for settlers from the Lebanon, but as things are, the standard of living and status of the Lebanese peasant is higher; compared with the Syrian peasant he is a free man, and there is no inducement to leave the Mountain for the underpopulated plains of central or northern Syria.

LAND TENURE

Corresponding to these different methods of farming, there are different systems of land tenure.[1] In Lebanon individual small ownership is well established, and the pattern of village life, with its broad class of small peasant owners, few large farmers, and a growing class of landless labourers, resembles that of Europe.

In Syria, the greater part of the land is owned by city notables—the ruling class—and cultivated by small share-tenants. Though individual ownership exists in some districts, for instance the Beqa Valley and the oasis of Damascus, the most usual form of landownership in the plain districts of Syria is share-tenancy. The villagers bring their corn to the village threshing floor, and when the grain is threshed the landlord or his agent stands by and takes one-half of the grain. Towards this result he has contributed nothing; all labour, equipment, seeds, livestock, have been supplied by the tenant, so that his share is rent purely for the use of the land. The landlord is almost always an absentee, a city notable who only visits the land to collect rent.

The share taken by the landlord varies from district to district, and also varies with the condition of the land. According to an inquiry made by the French authorities, the usual division of the crop for non-irrigated cereals is 40–50 per cent to the

[1] The information which follows is mainly based on A. Latron, *La Vie rurale en Syrie et au Liban* (Beirut, L'Institut Français de Damas, 1936). The brilliant and profound study by Jacques Weulersse, *Paysans de Syrie et du Proche-Orient*, is an indispensable authority which unfortunately was received only after going to press.

probably few, of the estates are the properties of old, wealthy families of Ottoman times, which still exist in Lebanon, such as the lands belonging to the families of Arslan, Jumblatt, Chehab, Khazen, but many of these have been broken up by the Moslem laws of inheritance. Other estates have originated from direct grants made by Turkish Sultans to influential politicians, as for example the two very large estates in the Beqa and the Litani valley. Others too were formed at the time of the general registration of property undertaken by the Ottoman Government when chiefs of tribes or villages registered tribal land in their names as their private property. Uncertainty about legal title to land gives the educated classes frequent opportunity for ousting peasant owners, and while villages have come into the possession of rival groups of city notables, as a result of litigation among the villagers who have sought their assistance in establishing their title.

While the land-tenure system is thus a result of peasant poverty, it also perpetuates poverty by standing in the way of any long-term investment. The high percentage of fallow in Syria suggests a great waste of land resources, and there could certainly be some improvement in yields, even in dry land farming, if green crops were introduced more generally into the rotation. But the share-cropper has little incentive to improve the fertility of the land, since he has no certainty of tenure, and since the landlord will take 50 per cent of any increase. Since the landlords are not as a rule directly interested in farming, they do not themselves undertake long-term improvements in the land.

Three case studies illustrate the ways in which the land-tenure system hinders advance.*

One study relates to the large estate of Misherfe, near Homs in central Syria. This is 24,000 acres in extent and includes five villages, with 2,500 inhabitants. It is very extensively cultivated, only one-third of the area, 8,000 acres, being cropped each year. The land is divided into three parts, one with wheat, barley or *qatani* (mixed grain), one ploughed but not sown, and some left fallow. A small area, one acres only, is irrigated, though water supplies are sufficient to irrigate much larger areas.

* These studies, which were prepared for the M.E.S.C., are not at present available in print.

Lebanon ME1
Syria ME1

LAND TENURE

Of the total 180 families in the village, 100 own some land and 80 own no land. The peasant owners are divided as follows:

1. Rich farmers, owning about 10 hectares	5	families
2. Medium farmers, owning from 3 to 8 hectares	80	"
3. Poor farmers, owning between 1 and 3 hectares	15	"
4. Share-tenants	10	"
5. Labourers	30	"

As in Mishrife, two-thirds of the land is cropped each year. The peasant divides the land into three plots, one sown with a crop, one ploughed but not sown, and one fallow. The wheat yield is slightly higher than the average for Syria, and amounts to 833 kilogrammes per hectare (6½ hundredweight per acre); barley yields are also slightly higher, being 8 hundredweight to the acre.

As a result of the more equal distribution of land, rather better yields, and more irrigation, the standard of living is better than in Mishrife. The first two classes, including half the families, can reach an adequate standard of consumption of food and other essentials, which is reckoned to be 25 kilogrammes of wheat per month, 1 kilogramme of meat per month (i.e. one sheep a year), 40 kilogrammes of olive oil and 20 kilogrammes of 'samn' per year, 4 lbs of kerosene and a small quantity of clothing. The remainder of the village, about one-half of the total, that is the poor peasants, labourers, and share-tenants, are unable to reach this standard and live in great poverty, in near-constant hunger. The majority of these cultivators are heavily indebted, and the burden of indebtedness has doubled during the war years, because debts are usually incurred in gold.

The third study returns to Kfar Sa'ab in the north Lebanon, a hill village of small owner-cultivators. Of the total area of 900 hectares, about 70 are owned by the sheikh of the village. The total number of families is 150 (1,000 people), of which 100 own land and 50 are landless. A few peasant owners are rich with 5 hectares of land; 60 are medium owners with 1·5 to 2·5 hectares of land, and 25 own 0·5 to 1·5. Share cultivation is much more extensive than in Syria, and half the land is [illegible]

[illegible] near Damascus — Arabic

irrigated. The whole of the land is cultivated every year, the rotation being wheat followed by potatoes, the potato crop being irrigated. The wheat yield is below the average for Syria, amounting to 6 hundredweight per acre, and the potato yield is 3 hundredweight per acre.

However, in spite of the greater intensity of cultivation, the shortage of land means that the majority of the peasants are not able to attain an adequate standard of living, measured in terms of a few essential commodities: 10 kilogrammes of wheat and 4 kilogrammes of meat per head per month, 100 kilogrammes of olive oil per annum, and 5 ton of kerosene. To attain this standard a family must own 3 hectares of land, and as only the rich peasants and a few of the medium peasants own as much, the majority of the medium peasants and the poor landless peasants do not achieve it. The majority of these supplement their income by remittances from their emigrant relations abroad. Those who have no income from abroad leave the village to work as unskilled workers or servants in the towns.

In this village, therefore, the cause of poverty is the shortage of land, since the land is much more equally distributed than in Syria and the system fairly intensive. Living conditions are far better than in Syria: the majority inhabit stone houses with two or more rooms. The richer peasants are also more sophisticated than those of Syria, preferring to gamble their money away in the neighbouring summer resorts rather than spend it on jewellery.

From these three studies three conclusions emerge. The first is that a higher income per acre depends on irrigation, since the net income from irrigated land is two or three times as high as from non-irrigated land.

INCOME PER HECTARE ON IRRIGATED AND NON-IRRIGATED LAND (in Syrian Pounds)

	[illegible] non-irrigated	[illegible] irrigated	[illegible] non-irrigated	[illegible] irrigated	[illegible] irrigated
Gross Income	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Costs	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rent	—	—	[illegible]	[illegible]	—
Net Income	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] in the north Lebanon -- Analyst

the land. In 1926–31, 180 villages comprising 181,000 hectares were colonized in small properties by 6,000 families. The Government of Latakia compelled large proprietors in the region of Homs to give up their villages in the district of Masyaf in 1929; the land was distributed among the occupying peasants and sold to them at a price to be paid for in ten annual instalments. The village of Jib Ramle was also settled in 1929, in part by occupying peasants, in part by refugee Armenians.

But the French administration did not complete the settlement of these areas. In some regions the Turks settled these lands with nomad tribes, who were themselves averse to cultivation and either rented the land to Alawi villagers or continued to live themselves as nomads on the land without cultivating much of it. Consequently this land is now very sparsely settled. Round Homs there are said to be 2,000 to 4,000 hectares with only 10 per cent of the land cultivated: this is some of the most fertile and best situated land in the country, and could be developed by colonization schemes.

In several respects the French authorities have modified the Turkish system in ways which strengthen the landowners against the cultivators. One of these was the sale of the extensive Waqf properties to business enterprises, irrigation companies, or landowners. Another was the abrogation of the right of ownership acquired by ten years cultivation which benefited the small cultivators in enabling them to acquire new land.

Efforts were made to start co-operative and agricultural credit banks, but these never succeeded in lessening the peasant's indebtedness. Several large-scale irrigation schemes were started, but produced more water than could be used. The educational system did not extend to the villages. Within the framework of the existing system, these reforms did little to raise the standard of the peasants. As a mandatory Power the French relied on the collaboration of the wealthy upper class, that is, on the landowners, and so could make no fundamental reforms in the land system.

POSSIBILITIES OF DEVELOPMENT

So far as dry land farming is concerned, the possibilities of improvement are hampered by the dry summer, which normally lasts a long period of fallow. However, it would be possible by

Lebanon ME 1
Syria M01

better cultivation, if more machinery were available, to reduce the fallow to one year out of two, instead of two out of three in the districts where this is customary; it would also be possible, by machine cultivation, to keep weeds under control. (See Chapter VIII.)

The main possibilities of development, however, depend on irrigation. At present an area of some 500,000 acres is irrigated, and even under the existing scheme much water is wasted. How much additional land could be irrigated is a subject for controversy. Mr Soubhi Mazloum, a Syrian irrigation engineer, suggests that the total area which could be irrigated, including the use of the Euphrates water, may be as large as 1,200,000 hectares (2,960,000 acres);[1] but this figure refers to the area which it is *physically* possible to irrigate, not the area which could be irrigated with any prospect of economic return.

A more exact and detailed estimate was prepared by Professor Addison, the irrigation expert, who surveyed existing schemes in 1943 and considered that the extension of those which was then economically practicable would irrigate some 68,000 hectares (168,000 acres) in addition to the area already irrigated.

The difference between these two estimates indicates how wide a range of opinion there is. A survey is now being prepared by a British irrigation firm on behalf of the Syrian Government, to provide the basis of development projects, and pending its publication it is impossible to quote any more satisfactory estimates.

The Jezira and Euphrates Province. In inner Syria, the Jezira area and part of the Euphrates province in the north-eastern corner of the country, there are quite large possibilities of extending cultivation both in the rain-fed zone, and by irrigation. North of a line from Tiyne to Sheikh Saleh there is sufficient rainfall to water the winter crops. In the 'Duck's Bill' and along the Turkish frontier to a depth of about 10 miles to Derbisiye, the rainfall is 30 to 100 centimetres per year (20–40 inches), and south of this there is another belt with rainfall of 25 to 30 centimetres (10–20 inches), about 30 miles wide.[2]

[1] 'Le Problème de l'Eau en Liban et en Syrie', in *L'Agriculture, Revue Nationale*, (Beirut, 1946).

[2] This information is based on an unpublished report prepared for M.E.A.C. in 1944.

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CHAPTER V

COTTON IN LEBANON

Lebanon is the smallest, the most cosmopolitan, and one of the most progressive countries in the Middle East. Beirut, the capital, is a modern, pleasant summer resort, whose shops are known over the world. Probably this contact with the world through Beirut explains the strong Western influence in the country.

But Beirut is not Lebanon, and tourism and commerce still are minor aspects of the economy, which still is primarily agricultural. The country as a whole has not modernized as much as the cities. The farmers are much more provincial.

BACKGROUND

The country has limited resources. The total area is less than 4,000 square miles, a third the size of Maryland, and most of it is mountainous. The crop land is limited to the narrow coastal plain which averages only four miles in width, and to the numerous fairly small valleys in the mountains.

Lebanon always has had a great many more people than its agriculture can sustain. In the past this pressure was relieved by emigration, but restrictions of the past 25 years, at home and abroad, have checked the exodus and intensified the problem. The population is now about 1.2 million.

Progress has been encouraged by the government which is admittedly one of the most stable in the Middle East, despite its lack of experience. Lebanon became an independent Republic only in 1941, after the French mandate was ended. It has kept remarkably independent and practical and has not allowed itself to become embroiled in nationalistic issues as many of the other Arab states have.

INDUSTRY

With few exceptions, industries are small and devoted chiefly to the production of light consumer goods such as matches, rubber goods, soap, furniture, cigarettes, beer, macaroni, biscuits, and olive oil. The two chief basic industries are the Iraq Petroleum Company's Tripoli topping plant and the Chekka cement factory. Other basic manufacturing plants include cotton textiles, glass, and wire textiles.

AGRICULTURE

Roughly a third of the tilled land is devoted to cereals and the balance to a wide variety of crops—fruit trees, vineyards, vegetables, and a number of industrial crops including cotton. Approximately 15 per cent of this area is left fallow each year.

The western plains receive 20 to 40 inches of rainfall a year, and that only during the winter months. Because of the dry summers, a few of the crops

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COTTON IN LEBANON

Table 40

[illegible]

Item	[illegible]	[illegible]	[illegible]	[illegible]
	Per Cent			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]
Total Value (Converted to Millions of Dollars)	[illegible]	[illegible]	[illegible]	[illegible]

Note: [illegible]
Source: [illegible]

Table 41

[illegible]

Item	[illegible]	[illegible]	[illegible]	[illegible]
	Per Cent			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]
Total Value (Converted to Millions of Dollars)	[illegible]	[illegible]	[illegible]	[illegible]

Note: [illegible]
Source: [illegible]

are produced under dry-land conditions. In the eastern plains and valleys, [illegible] where less rain falls, all economic crops are irrigated.

Most of the farms in the mountainous areas are owner-operated and have been in the same families for generations. This has tended to reduce the size of individual holdings to uneconomic proportions.

Agriculture in Lebanon, as in most Middle East countries, exhibits strong contrasts between the old and the new. The hand of the past is still heavy upon farming practices, but modern methods and machines are making steady inroads.

The country has never been self-sufficient, importing usually two-thirds of its cereals and significant quantities of other agricultural commodities. Food imports normally come from Syria but relations with that country now are strained. The Lebanese do not like this dependence upon imports for food. They remember the hungry days during both World Wars when imports were shut off. They want to become more self-sufficient and, at the same time, to

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COTTON IN THE MIDDLE EAST

improve the general food supply and particularly their diets, which even now are nationally better than in the surrounding countries. They also want to raise the income of the farming group and are anxious to increase exports to achieve a more natural trade balance. Commodity imports are three to four times the value of exports.

AGRICULTURAL OPPORTUNITIES

The various missions that have been studying the agricultural resources of the country report that opportunities for development are excellent. A United States Mission expressed the belief that the cultivated area might be doubled by reducing the fallow and grassland, and that 500,000 acres could be irrigated with water from the numerous mountain streams if dams, reservoirs, and canals were built. This Mission was encouraging also about the possibilities of increasing productivity.

The Mission submitted a long and detailed list of recommendations, the major ones of which called for: (a) developing an adequate scientific and technical staff, (b) establishing a more effective extension system, (c) organizing a central experiment station, (d) expanding the agricultural education program, and (e) efficiently utilizing water resources.[1]

The Mission specifically encouraged the expansion of fruit production, more interest in dairying, and the establishment of more agricultural processing plants.[2] The group did not encourage grain production, feeling that the limited acreage could be utilized more efficiently to the production of specialized agricultural commodities, and that it would prove more economical to buy wheat where it can be produced more cheaply.

Other agricultural agencies concur to the main with these conclusions and recommendations. A Point Four group, just getting established, is working along these broad lines.

COTTON

Lebanon has grown some cotton for many years. The crop declined to an insignificant level years ago and production did not pick up again until the period of high prices in 1950 and 1951. Lebanon as a whole has not joined the trend, prevalent in the Middle East, of reducing cotton acreage now that prices have dropped.

Production increased from about 6,000 bales a few years ago to 30,700 bales in 1951-52, the highest in recent times, and with expanded acreage the crop is expected to be raised this season, 1952-53, to between 35,000 and 36,000 bales.

Cotton production is concentrated in the northern Akkar plain near the Syrian border and in the valleys. For the most part irrigation is used.

Farms are fairly small and cotton usually is grown as one of several crops in a general farming system.

Yields averaged about 350 pounds, less than in the better cotton-growing areas of Syria. Sometimes Turkoids, mainly Acala, Lone Star, and Lockett varieties, are grown almost entirely.

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[1] Report of the United States-Lebanon Agricultural Mission, United States Department of Agriculture, September 1949, p. 4.

[2] Ibid., p. 5.

[illegible] made punishment by concealing the death of unregistered infants distort from the reliability of the meager data available. Local pediatricians believe that the mortality rate in children up to 5 years of age averages from 25 to 30 per cent for the country as a whole. It ranges from 10 to 15 per cent, or more, in Beirut proper to from 35 to 45 per cent in Tripoli, Sidon and the towns of the hinterland. In the more remote villages of South Lebanon, the standards of living are extremely low, and the mortality in children under 5 years of age probably reaches 50 to 70 per cent. Intestinal diseases are foremost among the causes of death in infancy and early childhood.

Some Economics

The economy of Lebanon is based upon agriculture, but the country is in a more favorable position than the neighboring Arab states, in that the national income is augmented by an increasing tourist traffic and by remittances to their families from emigrants living abroad. Although the coastal plain and the Bekaa valley support a variety of crops, a large part of the territory is mountainous and unsuitable for cultivation. The coastal region is cultivated intensively, with a series of narrow terraces extending along the seaward slopes of the Lebanon range up to an elevation of about 1,000 feet. Little more than 20 per cent of the total land area is now under production, while less than one fifth of that is irrigated. Considerable disparity exists between various estimates of the amount of arable land, but all agree that it can be increased materially by a greater utilization of the available water resources and by improved methods of cultivation. Progress here already been initiated by the further development of irrigation facilities, notably in the southern Bekaa, and in the Akkar plain, a triangular area between the coast and the northern frontier with Syria. The tradition of private ownership is strong in the mountainous districts of the north, and most of the land is cultivated by independent [illegible] farmers.

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are farmers. Large holdings, owned by absentee landlords and worked according to the share-tenancy system, predominate, however, in the Bekaa valley, in the 'Akkar plain and in the province of South Lebanon.

A diversity of crops is grown in different parts of the country. The subtropical climate of the coastal plain permits the cultivation of citrus fruits and bananas, while olives, grapes, apricots and other fruits flourish on the terraced mountain slopes. Cereals and legumes are the chief crops of the Bekaa, but cotton, tobacco and numerous types of vegetables are also produced. Large numbers of goats, as well as sheep, cattle and other livestock, are raised, primarily as food or draft animals. Sericulture is carried on in many mountain villages, but the competition of artificial silks has contributed to its decline within recent years. The government encourages the expansion of agriculture through the promotion of co-operative credit and marketing facilities. There are no experimental farms or research centres, but instruction in modern methods of farming is provided by the agricultural division of the government's vocational school in Beirut and by the American University.

The mineral resources of the region are negligible. Small deposits of lignite, located in the hills above Beirut and Tripoli, are worked intermittently. Salt is also extracted in evaporating beds along the coast north of Beirut. The development of modern industry received some impetus during the war years 1941-45, but is handicapped by the scarcity of raw materials and the limitations of the internal market. Numerous small plants exist for the processing of consumer goods, including the manufactures of textiles, cement, soaps, distilled liquors, leather goods, cigarettes, olive oil and various foodstuffs. The Iraq Petroleum Company has recently established a refinery at Tripoli, the terminus of its pipeline from the oil fields in the Kirkuk region. The chief exports are citrus and olive oil, textiles, silk, fruits and petroleum products.

[illegible]

Lebanon to furnish Sharel and Ghatchanne water to a number of villages in the area which were completely without suitable sources of supply. A program for the provision of satisfactory water supplies to most of the towns and the villages in the country has been projected by the Ministry of Public Works, which is responsible for their construction in consultation with the Ministry of Public Health.

Numerous small irrigation projects are in use, especially in the orange groves and the banana plantations of the coastal region and in the truck farm areas of the Bekaa. The majority depend upon wells operated by pumps. Two important large-scale programs have been undertaken within recent years, the diversion of the western portion of the Litany River, known as the Nahr el Kasmieh, to irrigate part of the coastal plain between Tyre and Sidon, and the construction of canals from the spring-fed Lake Yammouneh, to provide for the irrigation of sections of the Bekaa, in the vicinity of Baalbeck. The harnessing of the Litany River for irrigation and hydroelectric purposes was started in 1951, while plans are under way for the irrigation of the Akkar plain from the Nahr el Kebir and adjacent streams and for the better utilization of the Orontes River.

Waste Disposal

Sewers exist in some of the larger communities, but septic tanks, cesspits and pit latrines are the usual methods of sewage disposal in most towns and villages. A sewerage system serves about 90 per cent of the city of Beirut, the sewage being discharged untreated into the sea from 7 major and numerous minor outlets. Septic tanks and latrines are employed for the houses which are not connected with the sewers. A municipal sewerage system also exists in part of Tripoli, but cesspits are used in many sections of the city. In some areas the sewage is collected in open ditches for the irrigation of the orange groves, the fig orchards and the vegetable gardens.

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Government regulations provide for the construction of sanitary facilities for every household in the rural areas, but they are not subsequently enforced in many villages. The standards of sanitation are often low, particularly in South Lebanon, and pollution of the ground is a common practice. Night soil is frequently utilized as fertilizer, and the consumption of uncooked vegetables contaminated in this manner contributes to a high prevalence of intestinal infections.

Vectors and Pests

Anthropoda. Mosquitoes. To date, 9 species of anopheline mosquitoes have been reported from Lebanon, but only three—*Anopheles superpictus*, *A. sacharovi* (= *A. elutus*) and *A. claviger* (= *A. bifurcatus*)—are of primary concern as vectors of malaria. *A. pulcherrimus*, *A. wagneri*, *A. algeriensis*, *A. hyrcanus*, *A. melanoon* and *A. marteri* have also been identified, but all are rare or localized in distribution.

A. superpictus is widespread and the most difficult to control, since it breeds prolifically in the numerous mountain streams, as well as in pools formed by the overflow from springs, in seepages, in irrigation canals and seepages, where the water is clear and at least partially exposed to the sun. Larvae are found from April to November, with peaks of prevalence from July to September, in localities below 1,200 feet and even shorter periods at elevations up to 4,000 feet. *A. sacharovi* breeds in swampy areas and along the vegetated margins of ponds, streams and neglected irrigation canals and seepages. It is most abundant around the coastal swamps formed by obstructions at the outlets of the rivers and in the marshlands bordering large underground springs in the Bekaa Like *A. superpictus*, it breeds from April to November, while its prevalence varies with the degree of flooding during the rainy season. The preponderance of both species is influenced to a large extent by the timing and the volume of the winter and the spring rainfall.

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government's increasing concern for the improvement of water supplies was reflected in a diminution in the number of recorded cases from 1,274 in 1949 to a low of 342 in 1955.

The relative prevalence of paratyphoid fevers is uncertain, since the differential diagnosis is seldom confirmed by laboratory examination. Paratyphoid B infections apparently predominate. Cases of paratyphoid B fever are sometimes seen in the hospitals, and, in the opinion of local observers, are typically serious. Salmonella thompsonii (C) is also reported from this region.

Mass immunization with typhoid-paratyphoid A and B vaccine is undertaken by the health officials in all communities from which cases have been notified. Immunization is also carried out routinely each year in the government schools in urban districts and in the child health centers.

Dysenteries. Dysentery ranks with typhoid fever as a major public health problem in Lebanon. The insanitary methods of sewage disposal in towns and villages, the abundance of flies and the widespread use of night soil as fertilizer promote the spread of bacillary and amebic infections through contaminated food and water supplies. In the official statistics for the 3 years 1947 and 1948, the deaths listed under the group heading, dysentery, averaged about 11 per cent of the total recorded deaths.[6]

In a survey reported in 1955,[6] Shigella sonnei dysentery was identified in from 15 to 35 per cent of the fecal specimens from the inhabitants of three widely separated rural villages in the Lebanese Mountains, the Bekaa and the southern littoral. Competent authorities in Beirut believe that the carrier rate is normally higher, however, and that it may reach 50 to 70 per cent among the adults in some sections of the population. Acute amebiasis is common, and accounts for about 15 per cent of all the cases of dysentery treated in the local hospitals.

Bacillary infections, a large proportion of

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[illegible]

[illegible] evidence of serious [illegible] development, however. Although the [illegible] of the Volcano Basins and the opening of [illegible] harbours to the surrounding [illegible] [illegible] Lehmann's economic trends, [illegible] continued to be an important [illegible] activity. Its rise is due largely to the enlargement of the harbour and to the maintenance of a good network of roads. These improvements, together with the development of public utilities and [illegible], attracted to Lehmann an increasing number of [illegible] industries.

In agriculture, the most important development was the expansion in the acreage planted to olive and fruit trees, and the improvement in quality. The [illegible] production gradually exceeded after 1955 even increased industry. In the outskirts of the Harvest Moon Hot, some 30,000 persons were employed in plantation and small holdings, including craftsmen engaged in such traditional [illegible] occupations as silk reeling. [2]

During the Harvest Moon Hot, the large-scale expenditure of direct foreign [illegible] incomes and prices, [3] and the reduction of imports further stimulated industrial production. This increase was achieved with existing equipment, since no additional would be imported.

Another result of the war was the improvement of communications. The Harvest campaign led to [illegible] and the shift to profits took the form of [illegible] and erecting [illegible] which to [illegible] administration and [illegible].

From the Harvest, 1951 to 1955

Since 1951, the economic course of Lehmann has [illegible] considerably, and evolution here contrasts a rise in consumption. The [illegible] in 1951 of the [illegible] value [illegible] into force, which [illegible] Lehmann's own important sector, caused a serious, unprecedented to several years, to appears, to the [illegible] growth.

Emigration, which had almost ceased during the war years, increased in the [illegible] period. In several years to the average over 1,000 per annum, [illegible] [illegible] with an annual [illegible] increase of about 17,000. Emigration was, however, offset by an influx of over 10,000 Palestinian Arab refugees in 1949 and 1951. The maintenance of these refugees by the United National Relief and Works Agency for Palestine Refugees has largely assisted the Lehmann economy [illegible] [illegible], though [illegible] [illegible] to the country [illegible] a few [illegible] [illegible] [illegible]

...ought into capital and the use of modern and scientific methods. Further significant gains in the export of products of the development of Middle Eastern petroleum resources, as export duties increase and capital is used for refining, transport and distribution facilities, are likely to be of considerable importance to the region. These projections have been made in relation to the United States dollar, equivalent to 12% and 13%, and the task underlying the goals is formidable with these, compared to 12%. A railway was built to Tripoli and another was begun. Lebanon has also benefited from the location of offices of oil companies in Beirut. In addition, it has received many tourists, as well as some capital, from the oil producing countries and the regional agencies in these countries. For example, Saudi Arabia and Kuwait have to use as transit, and, recently, as refinery ships. Finally, royalties paid by the Government to the oil companies for pipelines and have contributed to export gains.

The development of export trade has also contributed to the national income. The increase in such trade has made possible the enlargement and improvement of the port of Beirut mainly before the Second World War, development of tourist accommodation, provision of refrigerated storage and other storage facilities and extension of the line used by the railroad from 5,000 square metres in 1950 to 15,000 in 1955 and 17,000 in 1957. Although the development of services has stimulated most of Lebanon's trade, Beirut still handles a substantial proportion of that trade as well as a large fraction of that of Jordan, which previously passed through Haifa. The opening of a new airport in Beirut, in 1954, has also stimulated imports of goods and passengers.

In recent years, Beirut has been the centre of a large and widespread gold trade. The geographical and economic disadvantages of Beirut's position has also greatly increased the importance of Lebanon as an intermediary financial centre. Tripoli has developed in much the same manner to play a significant part in the country's economy.

Agriculture

Despite considerable progress in the cities and abroad, nearly half the national population still earns a livelihood in agriculture. Rural agriculture accounts for some one and fifth of the national income (see table 4), per capita income in agriculture is still below the average in other sectors. The predominant farming agriculturists consist of subsistence agriculture and, however, are limited. According to the latest estimates, of the total area of [illegible] hectares, [illegible] hectares consist of rocks, waste or building sites, [illegible] consist of forests, [illegible] are judged to be cultivable, though at present unexploited and [illegible] are under cultivation. Of the cultivated area, [illegible] hectares are irrigated and [illegible] are rainfed, the irrigation projects under way or due to be undertaken in the next [illegible] will bring [illegible] hectares of rainfed land under irrigation. [1] The reclamation of the [illegible] hectares judged to be cultivable would involve many capital outlay, since most of this land is mountainous. There, in recent years, efforts have been already concentrated on intensifying agriculture.

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[1] Figures from an agricultural census conducted by the Ministry of Agriculture in 1955. Individuals need own majority of agricultural properties in that they share 1.5 hectare, of which less than a third is irrigated.

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This has been achieved by increasing production of fruit and vegetables, for both of which Lebanon has great natural advantages. The topography of the country and the natural distribution of rainfall provide a diversity of climate which makes it possible to grow tropical fruits, sub-tropical fruits and fruits of the temperate zone. Soils are also sufficiently varied to suit a wide range of crops. Water is usually available in sufficient quantity, either as rainfall or from small-scale irrigation schemes. Plant diseases and pests are less prevalent than in most parts of the Middle East. The density of the rural population has made it profitable to concentrate on labour-intensive crops, while the relatively high level of education in country areas has encouraged innovation. The broken nature of the land has prevented large-scale mechanization, except in the plains, and has favoured crops which require little land, as has the prevalence of small-scale ownership. 1/ Finally, Lebanon's location has given it access to several important markets, such as Egypt for deciduous fruits, Syria and the Persian Gulf area for most fruits and vegetables, Argentina (until 1948) for vegetables, and Europe for early ripening varieties of citrus fruit and grapes.

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The expansion of fruit and vegetable crops was made possible by heavy capital investment. New terraces were built on mountain slopes, and old ones were repaired and strengthened. Various small-scale works carried out since 1942 have substantially increased the irrigated area. The use of selected seeds has considerably increased, as has that of chemical fertilizers. Before the Second World War, some 5,000 tons of chemical fertilizers were imported into Lebanon and Syria yearly. In 1947, Lebanon alone used 8,500 tons 2/ and 1951-53 imports into Lebanon averaged 17,000 tons. Lastly, there has been a rapid expansion of refrigerated storage space facilities. 3/ The greater part of the necessary capital came from outside agriculture, especially from commercial profits and savings earned in Beirut. The irrigation works were financed through the budg

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The rise in output of fruit and vegetables may be illustrated by citrus fruit, which increased from 71,000 tons in 1944 to 120,000 tons in 1954 (at

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1/ No general figures on land distribution are available but on the basis of information gathered in the course of a village survey jointly undertaken in 1953 by the Lebanese Office of Statistics and the United States Foreign Operations Administration, the following estimate may be made: nine to ten per cent of the land is in holdings of 100 hectares and above and 15 to 20 per cent in holdings of 20 to 100 hectares; the total number of large and medium holdings is 5,000. The remaining 70 to 75 per cent belongs to 175,000 smallholders, most of whom own less than two hectares. There are few landless peasants, and most of these rent land from the larger owners ("Proceedings of the Agricultural Credit Conference", Beirut, [illegible]).

2/ Sir Alexander Gibb and partners, The Economic Development of Lebanon (London, 1955), page 41. A breakdown shows that 46 per cent consisted of nitrogenous fertilizers, 33 per cent of superphosphates and 19 per cent of potash. Some 37 per cent of the total was applied to potatoes, 25 per cent to other vegetables and 38 per cent to fruit.

3/ The present capacity of refrigerators is estimated at over one million cubic, or about 2,000 tons. In Commerce du Levant, 1 October 1954. Imports increased in refrigerators [illegible] to 4 million in 1952, all has considerably increased since then.

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by apples, which increased from 13,000 to 18,000 tons. 1/ Since 1947, over 241 200,000 apple trees have been planted each year and it is estimated that, at 433 present, there are about 2.5 million trees, of which over two thirds have now reached the fruit bearing stage. 2/

In 1948 and 1949, fruit and vegetables accounted for 40 to 50 per cent and 20 per cent, respectively, of the net value of total agricultural production. Together with a few industrial crops, fruit and vegetables constitute the only agricultural products which provide an export surplus 3/ (see table 44).

Progress has been much slower in other fields. The output of wheat rose from 35,000 tons in 1934-38 to 51,000 in 1952-54, but this was partly offset by a decline in barley from 29,000 to 20,000 tons. The area planted to wheat remained unchanged, at about 70,000 hectares, and that planted to barley declined from 55,000 to 40,000 while the yields of both crops increased appreciably, owing to improved seeds, increased mechanization 4/ and irrigation and greater use of fertilizers. Wheat and barley yields, at about 8 and 12 quintals per hectare, respectively, are still, however, below the regional average 5/ and costs of production are high: in 1954, the lowest price at which Lebanese wheat could be profitably grown was estimated at LL 280 per ton, whereas imported wheat cost LL 220. 6/ In 1948 and 1949, cereals accounted for 20 and 12 per cent, respectively, of the gross value of agricultural production. The area planted to vines has increased from 11,000 hectares in 1934-38 to 20,000, and output of grapes has risen from 27,000 tons to 80,000. The area planted to olives has remained unchanged at 28,000 hectares, but average output has risen from about 28,000 tons to 55,000 tons, yielding some 10,000 tons of oil. About 1,500 tons of tobacco are produced each year, a quantity which leaves a small export surplus. An attempt was made to grow cotton, and in 1950 some 4,000 hectares produced 1,500 tons, but cultivation proved unprofitable and most farmers gave it up. On the other hand, acreage under beets has expanded, owing to the stimulus provided by sugar refineries in Lebanon and Syria, and the 1953 crop was estimated at 20,000 tons.

1/ Lebanese Delegation to Fourth Regional Conference of the Food and Agriculture Organization of the United Nations, Beirut, 13 to 26 September 1954, "Le développement de l'alimentation et de l'agriculture au Liban".

2/ Le Commerce du Levant (Beirut) 9 October 1954 and 10 January 1955. In 1954, however, Lebanese exports suffered from the competition of lower cost producers, such as Italy.

3/ The most important surplus products, in addition to citrus and apples, are potatoes, onions, bananas, figs, pears, plums, olive oil, tobacco and silk.

4/ In 1953, there were 134 tractors in Lebanon, compared with 99 in 1949; most of these are employed on wheat lands. Tractors imported in 1954 had an aggregate weight of 588 metric tons and in 1953 450 tons.

5/ In certain irrigated areas in the Bekaa plain, wheat yields have risen to 24 quintals per hectare (Fuad Saade, Le développement de l'agriculture au Liban Editions du Cénacle Libanais, Beirut, 1953).

6/ Al Bayrak, 25 June 1954 (Beirut).

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Table 11. Lebanon: agricultural production and consumption, 1971
(Thousands of metric tons)

Product	Area 1/ (hectares)	Production	Consumption	Deficit	Surplus
Vegetable products					
Cereals	225.1	131.3 2/	275.0	275.0	
Legumes	17.1	11.1	43.3	32.1	
Vegetables	27.5	297.0	169.7	7.0	122.3
Fruit	63.3	241.1	124.5	2.4	82.3
Industrial crops	14.1	77.0	85.4	69.3	3.4
Livestock products					
Meat	---	3.3	61.7	35.4	
Milk products	---	6.2	76.2	64.3	
Eggs	---	1.3	4.3	3.0	
Fish	---	3.0	3.3	0.3	
Forest products					
Charcoal	---	47.1	47.0	-	-
Firewood	---	61.1	61.0	-	-
Timber	---	275.0	400.0	25.1	

Source: Lebanese Delegation to Fourth Regional Conference of the Food and Agriculture Organization of the United Nations, Beirut, 13-24 September 1971, "La développement de l'alimentation et de l'agriculture au Liban" (mimeographed).

1/ Total cultivated area, 371,000 hectares, including 5,000 hectares under citrus crops and 15,000 hectares of fallow land. Total forest area, 74,000 hectares.

2/ Small accounted for about one-half and barley for one-quarter.

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Livestock production is still for from meeting local needs, and the lack of good natural pasture or fodder crops, together with the poor quality of breeds, limits the yields of animal products. These products account for only 8 per cent of net agricultural production. Recently, however, an improvement has taken place, prior to the importing of selected breeding-stock by the Government and farmers, reduction of the incidence of diseases and of antibiotics and improved feed-mixt, pulp and other concentrated foodstuffs. 1/

1/ Lebanese Delegation to Fourth Regional Conference of the Food and Agriculture Organization of the United Nations, Beirut, 13-24 September 1971, "Le problème de la production animale".